

We Claim:

1. A method of operating comprising the following steps:
 - detecting when a first network identification code associated with a first mobile device has changed;
 - 5 sending a first message via a wireless network to a first service gateway for forwarding by the service gateway to a second mobile station wherein the first message comprises the first network identification code;
 - 10 receiving from a second service gateway via the wireless network a second forwarded message that was sent by the second mobile station wherein the second message comprises a second network identification code that is associated with the second mobile station;
 - 15 storing the second network identification code; and
 - requesting a communication link between the first mobile station and the second mobile station via the wireless network using the second network identification code wherein the communication link does not traverse the first or second service gateway.
2. The method of claim 1 wherein first service gateway is the same physical device as the second service gateway.
3. The method of claim 1 wherein the first service gateway and the second service gateway comprise an email gateway.
4. The method of claim 3 wherein the first message and the second message comprise email messages.
- 20 5. The method of claim 1 wherein the first service gateway and the second service gateway comprise a short messaging service center (SMSC).
- 25 6. The method of claim 5 wherein the first message and the second message comprise short messaging service (SMS) messages.

7. The method of claim 1 wherein the first service gateway and the second service gateway comprise an internet gateway.
8. The method of claim 7 wherein the internet gateway provides a connection to an IP address service.
- 5 9. The method of claim 7 wherein the first message and the second message comprise HTTP packets.
- 10 10. The method of claim 9 wherein the first mobile station queries the IP address service to determine the IP address for another mobile station.
11. The method of claim 9 wherein the IP address service notifies the first mobile station when the IP address for another mobile station has changed.
12. The method of claim 1 wherein the first service gateway is selected from a group comprising an email gateway, a SMSC, a SMSC with an IP address exchange service, and an Internet gateway with an IP address service.
13. The method of claim 12 wherein the second service gateway is selected from a group comprising an email gateway, a SMSC, a SMSC with an IP address exchange service, and an Internet gateway with an IP address service.
14. The method of claim 13 wherein the second service gateway is the same type of service gateway as the first service gateway.
15. The method of claim 13 wherein the second service gateway is a different type of service gateway than the first service gateway.
- 20 16. The method of claim 1 wherein the first mobile station selects as the first service gateway a service gateway from a group

comprising an email gateway, a SMSC, a SMSC with an IP address exchange service, and an Internet gateway with an IP address service.

17. The method of claim 16 wherein the first mobile station selects one service gateway type for sending the first identification code to the second mobile station and selects a different service gateway type for sending the first identification code to a third mobile station.
18. The method of claim 16 wherein the first mobile station selects a first service gateway type for sending the first identification code to the second mobile station and selects a different service gateway type for re-sending the first identification code to the second mobile station.
19. The method of claim 1 wherein the message type for the first message is selected from a group comprising an email message, a SMS message, and a HTTP message.
20. The method of claim 19 wherein the message type for the second message is selected from a group comprising an email message, a SMS message, and a HTTP message.
21. The method of claim 20 wherein the message type for the second message is different from the message type for the first message.
22. The method of claim 20 wherein the message type for the second message is the same as the message type for the first message.
23. The method of claim 1 wherein the first mobile station selects the message type for the first message from a group comprising an email message, a SMS message, and a HTTP message.
24. The method of claim 23 wherein the first mobile station selects one message type for sending the first identification code to the second

mobile station and selects a different message type for sending the first identification code to a third mobile station.

- 25. The method of claim 23 wherein the first mobile station selects a first message type for sending the first identification code to the second mobile station and selects a different message type for re-sending the first identification code to the second mobile station.
- 26. The method of claim 1 wherein the first network identification code and the second network identification code comprise IP addresses assigned by the wireless network.
- 27. The method of claim 26 wherein the first mobile station comprises an IP-monitoring agent for detecting when the IP address of the first mobile station changes.
- 28. The method of claim 27 wherein the IP-monitoring agent sends the first message after it detects that the IP address of the first mobile station has changed.
- 29. The method of claim 1 wherein the first message is sent in response to a command by the user of first mobile device to send the first message.
- 30. The method of claim 1 wherein the first message further comprises status information, location information, or both status and location information.
- 31. The method of claim 1 wherein the second mobile station is registered as an associate of the first mobile station.
- 32. The method of claim 31 wherein the registration of the second mobile station is recorded in a mapping table.

33. The method of claim 32 wherein the registration of the second mobile station is recorded in a mapping table that resides in the first mobile station.

34. The method of claim 32 wherein the registration of the second mobile station is recorded in a mapping table that is external to the first mobile station.

35. The method of claim 32 wherein the mapping table comprises email addresses of associates of the first mobile station.

36. The method of claim 32 wherein the mapping table comprises SMS addresses of associates of the first mobile station.

37. The method of claim 1 further comprising the step of sending a response message to the second mobile station in response to receiving the second message.

38. The method of claim 1 wherein the communication link is a peer-to-peer communication link.

39. The method of claim 1 wherein the communication link provides a communication channel for an instant messaging conversation.

40. The method of claim 1 wherein the communication link provides a communication channel for a web server to provide web pages for information exchange.

41. A method in a wireless network system having a first wireless base station for providing a first communication link to a first mobile station, a second wireless base station for providing a second communication link to a second mobile station, and access to one or more service gateways for providing a message exchange service for the first and second mobile stations, the method comprising the following steps:

providing a first network identification code to the first mobile station;

providing a second network identification code to the second mobile station;

transferring a first message from the first mobile station to a second mobile station via a first service gateway wherein the first message comprises the first network

5 identification code;

transferring a second message from the second mobile station to the first mobile station via a second service gateway wherein the second message comprises the second network identification code; and

providing a communication path between the first mobile station and the second

10 mobile station in response to a request from either the first or second mobile stations or both that includes the first and second network identification codes wherein the communication path does not traverse the first or second service gateway.

42. The method of claim 41 wherein first service gateway is the same physical device as the second service gateway.

15

43. The method of claim 41 wherein the first service gateway and the second service gateway comprise an email gateway.
44. The method of claim 43 wherein the first message and the second message comprise email messages.
45. The method of claim 41 wherein the first service gateway and the second service gateway comprise a short messaging service center (SMSC).

20

46. The method of claim 45 wherein the first message and the second message comprise short messaging service (SMS) messages
47. The method of claim 45 wherein at least one of the first service gateway and the second service gateway further comprises an IP address exchange service.

25

48. The method of claim 41 wherein the first network identification code and the second network identification code comprise IP addresses assigned by the wireless network.

49. The method of claim 41 wherein the first message further comprises status information, location information, or both status and location information.

50. The method of claim 41 wherein the first message further comprises information relating to the capabilities of the mobile station.

10 51. The method of claim 50 wherein the information relating to the capabilities of the mobile station comprises information that identifies a device type, one or more supported features, one or more communication methods, or any combination of one or more device types, supported features and/or communication methods.

15 52. The method of claim 41 further comprising the step of sending a response message to the second mobile station in response to receiving the second message.

53. The method of claim 41 wherein the communication path is a peer-to-peer communication path.

20 54. The method of claim 41 wherein the communication path provides a communication channel for an instant messaging conversation.

55. The method of claim 41 wherein the communication path provides a communication channel for a web server to provide web pages for information exchange.

25 56. A method in a first mobile station comprising the following steps: exchanging network identification information with a second mobile station using a wireless network and a service gateway;

storing a network identification code of the second mobile station; and
requesting a wireless communication link between the first mobile station and the
second mobile station via the wireless network using the network identification code
wherein the communication link does not require any service gateway.

5 57. The method of claim 56 wherein the service gateway comprises an
 email gateway.

10 58. The method of claim 56 wherein the service gateway comprises a
 short messaging service center (SMSC).

15 59. The method of claim 56 wherein the service gateway comprises an
 internet gateway.

20 60. The method of claim 59 wherein the internet gateway provides a
 connection to an IP address service.

25 61. The method of claim 60 wherein the first mobile station queries the
 IP address service to determine the IP address for another mobile
 station.

 62. The method of claim 60 wherein the IP address service notifies the
 first mobile station when the IP address for another mobile station
 has changed.

 63. The method of claim 56 wherein the service gateway is selected
 from a group comprising an email gateway, a SMSC, a SMSC with
 an IP address exchange service, and an Internet gateway with an
 IP address service.

 64. The method of claim 56 wherein the first mobile station exchanges
 identification information with the second mobile station using a first
 and a second service gateway and wherein the first service

gateway is the same type of service gateway as the second service gateway.

5 65. The method of claim 56 wherein the first mobile station exchanges identification information with the second mobile station using a first and a second service gateway and wherein the first service gateway is a different type of service gateway than the second service gateway.

10 66. The method of claim 56 wherein the first mobile station exchanges identification information with the second mobile station using a first and a second service gateway

15 67. The method of claim 66 wherein the first mobile station selects as the first service gateway a service gateway from a group comprising an email gateway, a SMSC, a SMSC with an IP address exchange service, and an Internet gateway with an IP address service.

20 68. The method of claim 67 wherein the first mobile station selects one service gateway type for sending identification information to the second mobile station and selects a different service gateway type for sending the identification information to a third mobile station.

25 69. The method of claim 67 wherein the first mobile station selects a first service gateway type for sending identification information to the second mobile station and selects a different service gateway type for re-sending the identification information to the second mobile station.

70. The method of claim 56 wherein the identification information comprises an IP address assigned by the wireless network.

71. The method of claim 70 wherein the first mobile station comprises an IP-monitoring agent for detecting when the IP address of the first mobile station changes.

5 72. The method of claim 56 wherein the second mobile station is registered as an associate of the first mobile station.

10 73. The method of claim 72 wherein the registration of the second mobile station is recorded in a mapping table.

74. The method of claim 73 wherein the registration of the second mobile station is recorded in a mapping table that resides in the first mobile station.

15 75. The method of claim 73 wherein the registration of the second mobile station is recorded in a mapping table that is external to the first mobile station.

76. The method of claim 73 wherein the mapping table comprises email addresses of associates of the first mobile station.

77. The method of claim 73 wherein the mapping table comprises SMS addresses of associates of the first mobile station.

20 78. A method in a wireless network comprising the following steps: providing a first network identification code to a first mobile station and a second network identification code to a second mobile station;

transferring messages between the first mobile station and the second mobile station via a service gateway wherein the messages comprise the first network identification code, the second network identification code, or both; and

25 providing a communication link between the first mobile station and the second mobile station in response to a request from either the first or second mobile stations or

both that includes the first and second network identification codes wherein the communication link does not require any service gateway.

79. The method of claim 78 wherein the service gateway comprises an email gateway.

5 80. The method of claim 79 wherein the messages comprise email messages.

81. The method of claim 78 wherein the service gateway comprises a short messaging service center (SMSC).

10 82. The method of claim 81 wherein the messages comprise short messaging service (SMS) messages.

83. The method of claim 81 wherein the service gateway further comprises an IP address exchange service.

15 84. The method of claim 78 wherein the first network identification code and the second network identification code comprise IP addresses assigned by the wireless network.

85. The method of claim 78 wherein the messages further comprise status information, location information, or both status and location information.

86. A mobile station comprising:

20 a wireless transceiver for communicating over a wireless network;

a user interface;

a memory module that comprises storage space for an identification code

assigned by the wireless network to the mobile station and storage space for an

address mapping table that can be used to store the identification codes of other mobile stations; and

an address application, the address application being operative to send outgoing identification code messages to the other mobile stations listed in the address mapping table, the outgoing identification code messages including the identification code assigned by the network to the mobile station.

87. The mobile station of claim 86 wherein the identification code is an IP address.

88. The mobile station of claim 86 further comprising a message application for receiving an identification message from the wireless network that includes the identification code for the mobile station and for storing that identification code in the memory module.

89. The mobile station of claim 86 wherein the address application is operative to populate the address mapping table with identification codes for other mobile stations from messages received from the other mobile stations.

90. The mobile station of claim 86 wherein the mobile station is operative to send the identification code assigned to the mobile station in an outgoing identification code message of a message type selected from a group comprising an email message, a SMS message, and a HTTP message.

91. The mobile station of claim 90 wherein the mobile station is operative to receive an identification code from a second mobile station from an incoming identification code message of a message type selected from a group comprising an email message, a SMS message, and a HTTP message.

5

10

15

92. The mobile station of claim 91 wherein the message type for the outgoing identification code message is different from the message type for the incoming identification code message.
93. The mobile station of claim 91 wherein the message type for the outgoing identification code message is the same as the message type for the incoming identification code message.
94. The mobile station of claim 91 wherein the first mobile station selects one message type for sending the outgoing identification code message to the second mobile station and selects a different message type for sending the outgoing identification code message to a third mobile station.
95. The mobile station of claim 91 wherein the first mobile station selects a first message type for sending the outgoing identification code message to the second mobile station and selects a different message type for re-sending the outgoing identification code message to the second mobile station.